

Monitoring visual approaches

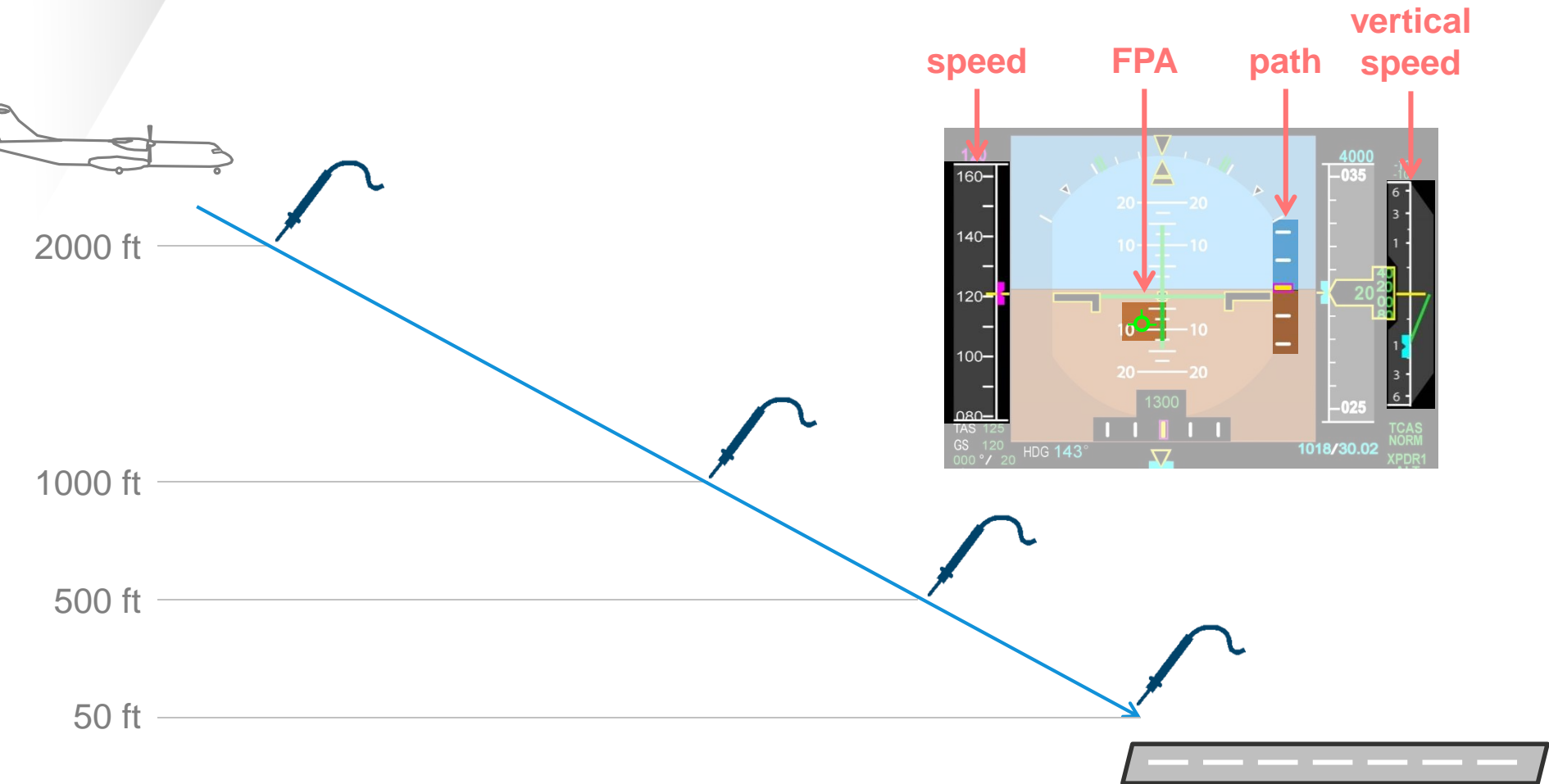
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*EASA FDM Conference
June 12th, 2017
Köln*

ATR
PROPELLING THE NEXT CONNECTION

Traditional monitoring of final approaches



It may work fine....



source: youtube

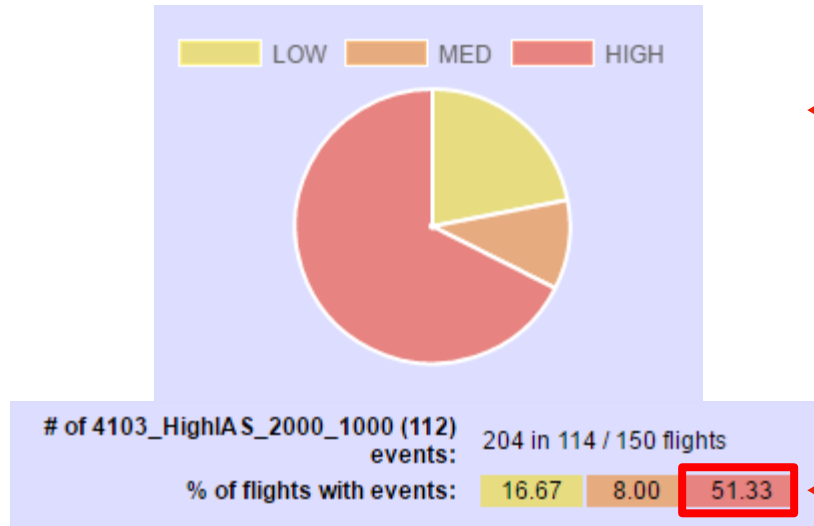
... or not that much



source: youtube

A need for change?

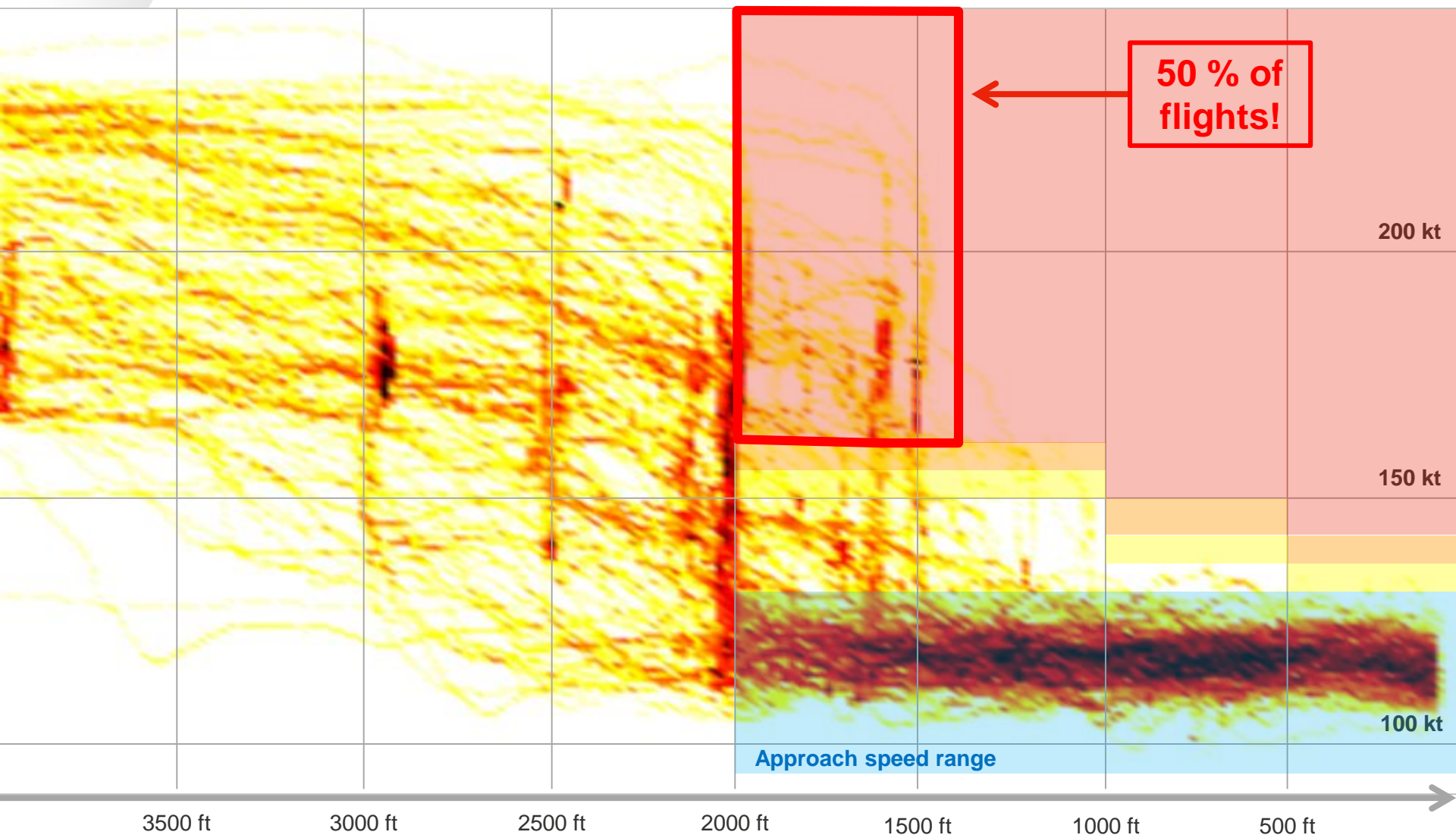
- Over 50% of visual approaches for some operators
- High speed between 2000 and 1000 ft event:



meaningless
breakdown by
severity

too many events
to be properly
analyzed

Density plot: Speed vs. Altitude on VFR airfield



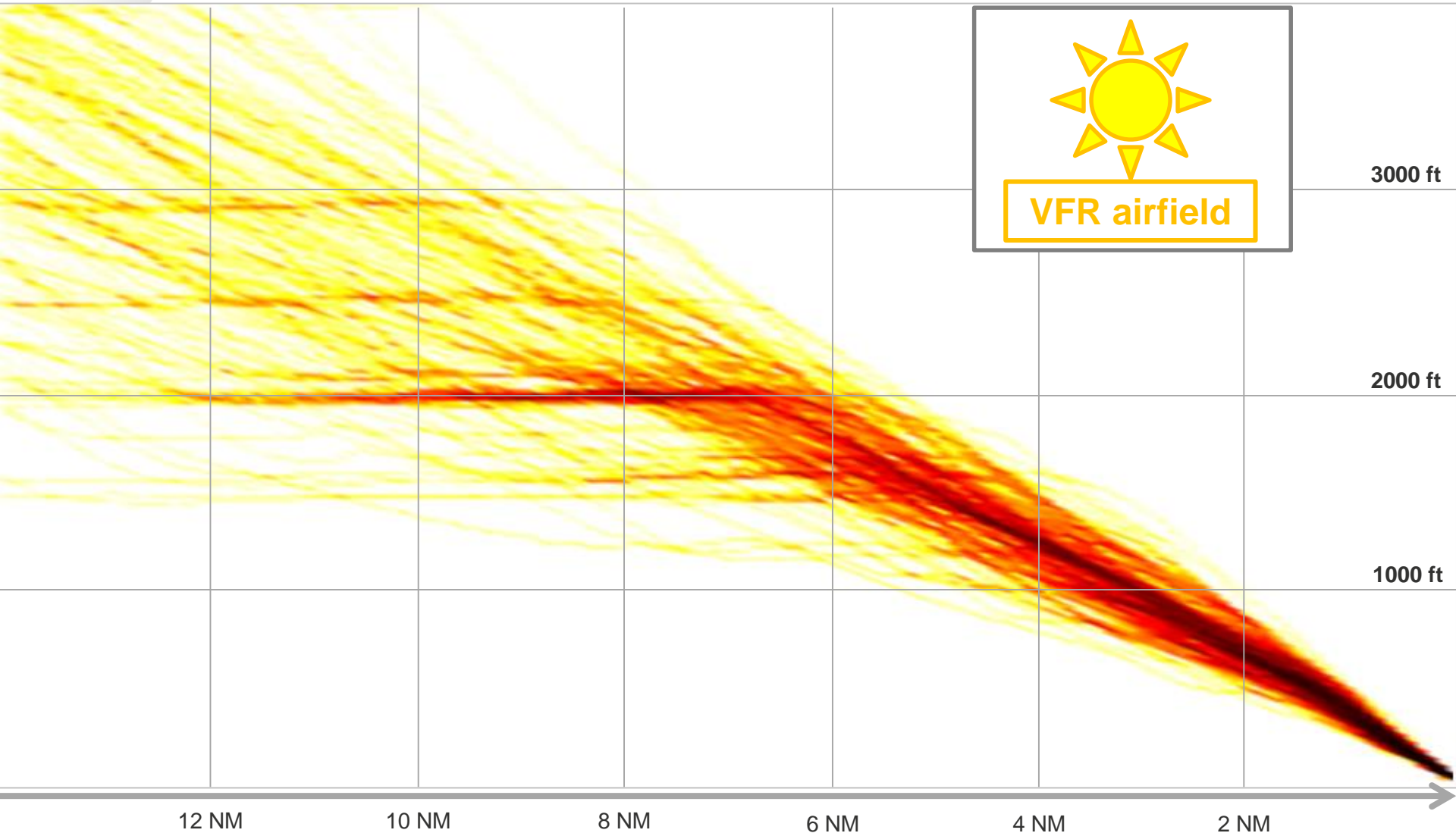
Way forward

- Available choices:

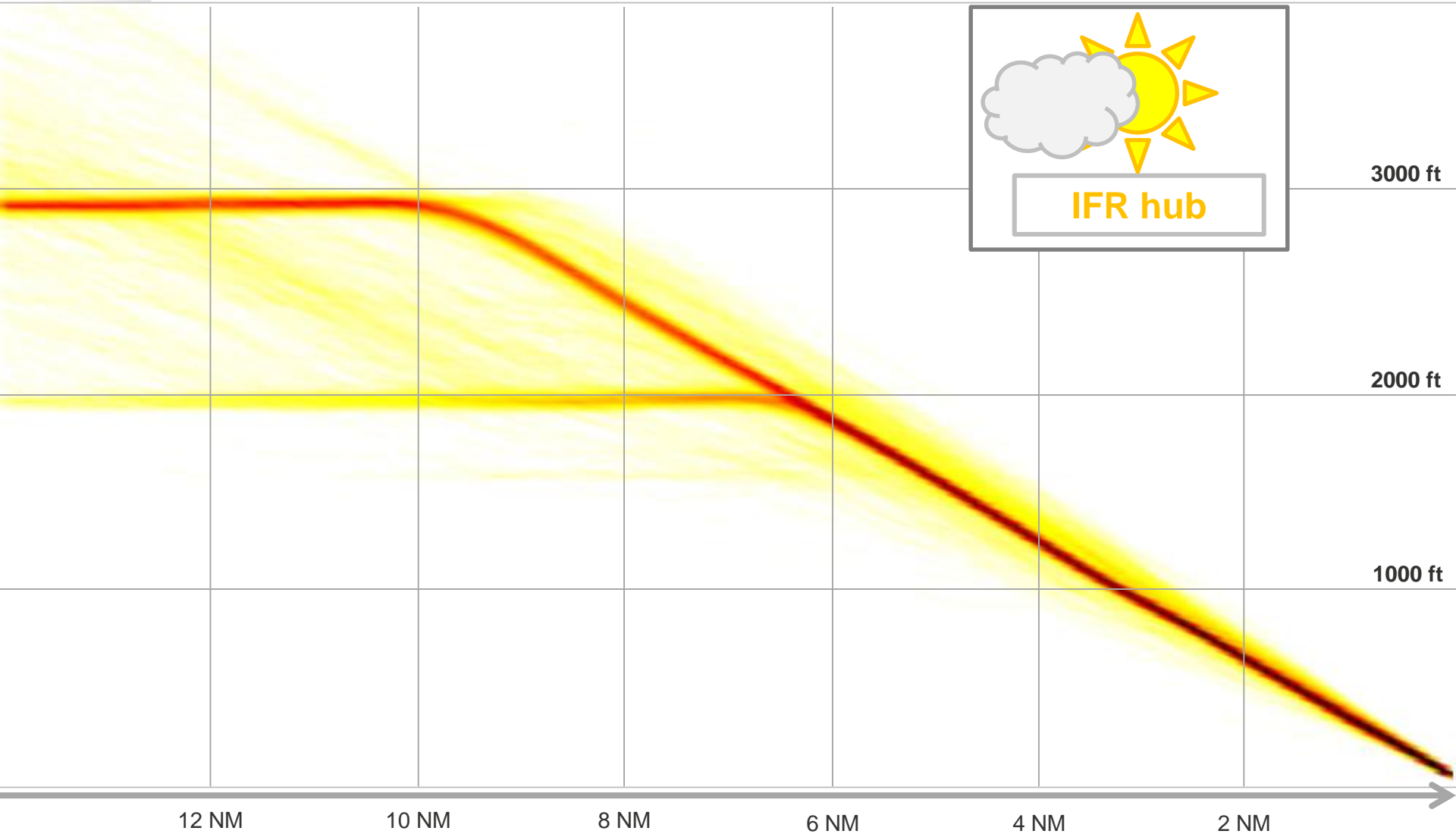
1. Disregard this specific event
2. Quit monitoring initial / intermediate approach phase at all
3. Adapt thresholds or logic
4. Find another viewpoint



Checking Altitude vs. Distance flown before threshold



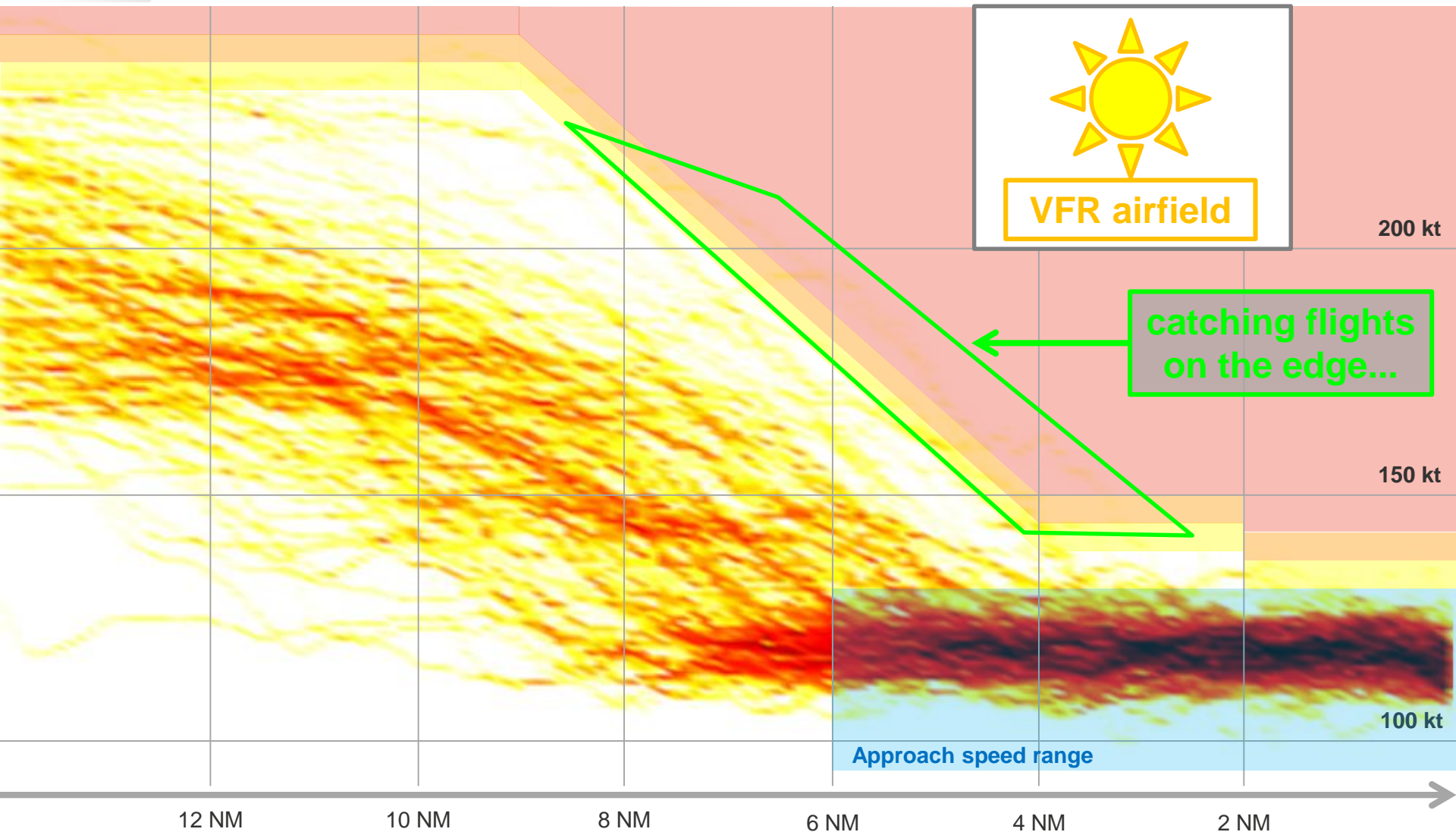
Checking Altitude vs. Distance flown before threshold



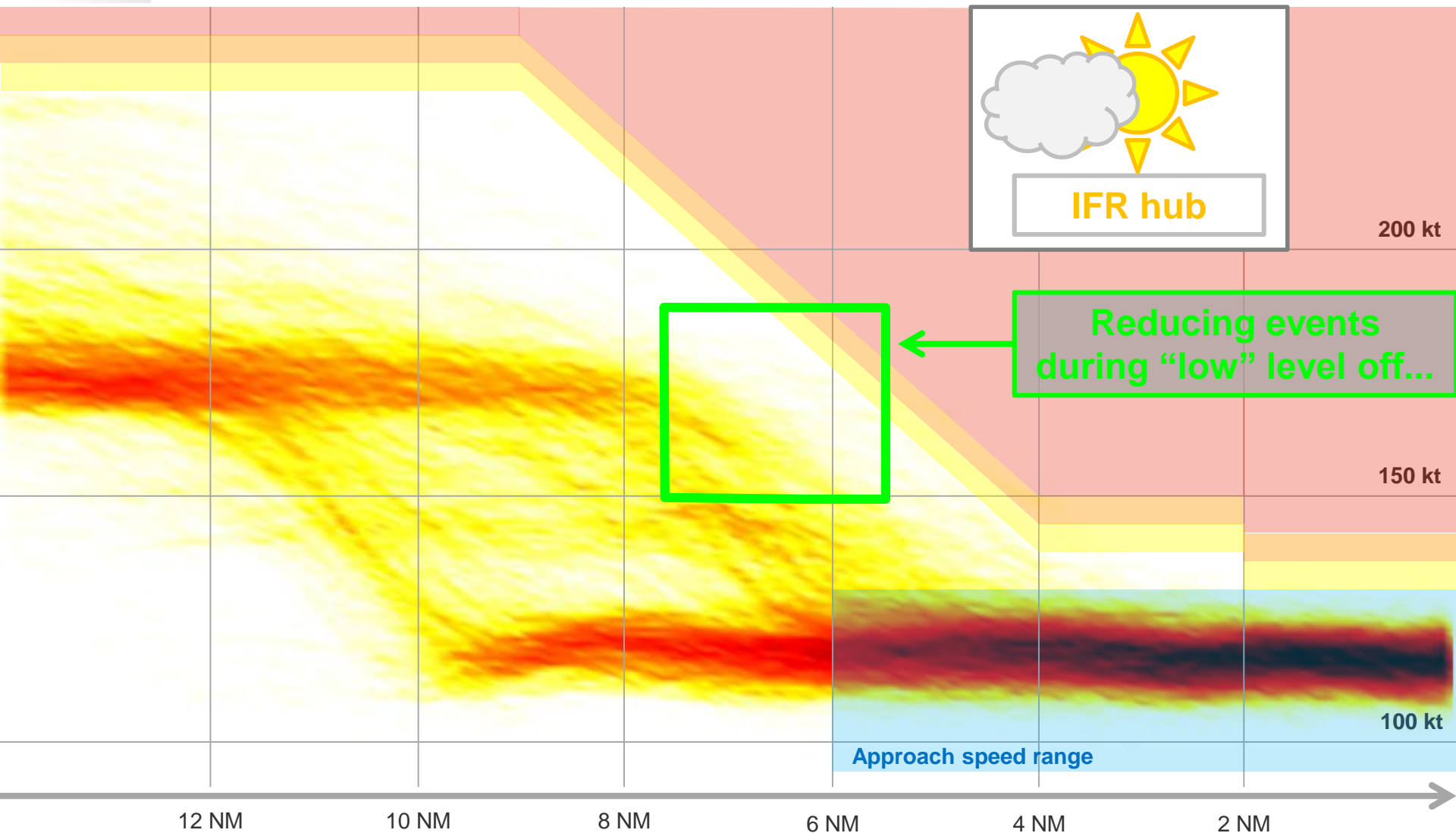
A different approach: Altitude vs. Distance flown

- On instrument approach equipped airfield, using Altitude or Distance flown to check flight parameters is nearly equivalent up to 2000 ft
 - events may be captured when level off is done at 2000 ft
- On visual approach airfield, using Altitude or Distance flown to check flight parameters probably has an impact

Testing Airspeed vs. Distance flown before threshold



Testing Airspeed vs. Distance flown before threshold



In conclusion

- Using Distance to threshold rather than altitude to monitor flight parameters provides better results
 - especially for visual approaches, but not only
 - covers low height level off (circling)
- Can be implemented as soon as reasonably accurate groundspeed and positioning of THR are available
- Should be using thresholds in function of distance to THR to avoid step changes
 - aircraft dependent



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